

Nudging in the World of International Policymaking

Cristiano Codagnone, Francesco Bogliacino, Giuseppe A. Veltri, Francisco Lupiáñez-Villanueva and George Gaskell

(Corresponding author email: gv35@le.ac.uk)

Introduction: from homo economicus to homo behaviouralis?

In most countries consumer protection policies have been designed and implemented on the basis of an explicit or implicit assumption that the average consumer is rational and that more information leads to better decision making, which in turn increases consumer welfare. This approach assumes that consumers are willing, and competent to deal with the information provided, to take informed rational decisions and to pursue their information-based rights. For example, in rulings about unfair commercial practices (as defined by Directive 2005/29/EC), the European court of Justice made use of a concept of the average consumer that is substantially biased towards Homo Economicus (Trzaskowski, 2011).

A major shift has occurred with the ‘behavioural turn’ in policy-making following the publication of *Nudge* (Thaler & Sunstein, 2008), when ‘*many psychologists discovered that the name of their trade had changed even if its content had not*’ (Kahneman, 2013, pp. viii-ix). Sunstein became Director of the Office of Information and Regulatory Affairs under President Obama, and Thaler became an advisor to the UK Behavioural Insight Team (BIT) (Kahneman, 2013, p. viii). In the UK, the Institute for Government published the discussion paper *Mindspace* (Dolan *et al.*, 2010), drawing heavily on the ‘nudge’ philosophy. This was followed by a programme with examples of nudging in health (Behavioural Insights Team, 2011). In 2009 the US National Institutes of Health has made the development of a “science of behaviour change” a priority (Blumenthal-Barby & Burroughs, 2012). A report about the use of nudge techniques for health was published by the Centre for Strategic Analysis of the French government (Oullier & Sauneron, 2010).

Understanding human decision-making is at the foundation of this approach, in which policy is designed to modify the choice architecture of individuals. In other words, interventions are designed to modify the context in which a decision takes place without changing the constraints faced and thus retaining freedom of choice. This is the philosophy of “libertarian paternalism” - by not affecting the options available in the choice set it can be deemed to be libertarian from a consequentialist point of view, while it is paternalistic in the sense of trying to induce ‘better’ choices (Thaler & Sunstein, 2003). It leverages the heuristics and biases that behavioural scholars have identified in their critiques of rational choice.

Heuristics are mental shortcuts used for fast processing of information, which can induce systematic errors of judgement and create or influence gaps between planned intentions and realised actions. This gap is also explained with the distinction between *System 1* and *System 2* as two interacting components of the mind. System 2 follows controlled

processes. It is slow, effortful, conscious, rule-based and can also be employed to monitor the quality of the answer provided by System 1. By contrast, System 1 is automatic, affective and heuristic-based, it quickly proposes intuitive answers to problems as they arise, requires less effort and cognitive engagement, and can be triggered by environmental and contextual cues. Another dimension partially overlapping with the distinction between system 1 and system 2 is that of 'hot' and 'cold' affect and cognition (Samson & Voyer, 2012; Strack & Deutsch, 2004; Strack *et al.*, 2006). Hot cognition involves a heightened response to stimuli, one that is driven largely by emotion. In contrast, cold cognition refers to unemotional, painstaking thought. The typical agent of standard economic theory uses only system 2 and is cold and unemotionally aroused in action, making fully informed, controlled, and considered choices. Hence, from the behavioural perspective, information does not necessarily produce better decisions, since contextual cues affect behaviour without conscious awareness. We eat too much and unhealthily even if we plan to do the opposite; we want financial security in old age but we can't resist buying a new car tomorrow.

In 2012 also the European Commission started to explore and test policy options using behavioural experiments (van Bavel *et al.*, 2013). In this chapter we outline some general and operational considerations based on the experience we have accumulated conducting several experimental behavioural studies for the Directorate General Health and Consumer of the European Commission (EC). These experimental behavioural studies included: a) a first test followed by a replication to assess the effectiveness of the new Combined Warning (text warnings and picture) that will appear on tobacco products in Europe in 2014 (we carried out two laboratory experiments and two online experiments; b) a laboratory experiment and an online experiment to test the effectiveness of CO₂ labels for vehicles; c) a laboratory experiment and an online experiment to test measures aimed at protecting consumers of online gambling services; d) a behavioural study, currently under design to assess the effect of online marketing practices such as 'advergaming' and 'in-app purchase' on children aged 8-11 years old. This paper proceeds as follows. In Section 2 we elaborate some more general and theoretical considerations that also have practical relevance. In Section 3, we introduce a taxonomy of nudges and of their applicability in different contexts. Section 4 concludes our contribution presenting practical and pragmatic considerations for policy related behavioural research.

Homo Behaviouralis: not a magic bullet

Libertarian paternalism aims at balancing the preservation of autonomy (consumer sovereignty) and the need to spur consumer behaviour towards a properly defined objective that consumers are not deemed able to meet (paternalism). The theory does not provide a universal criterion for the latter aim, which is an assessment that policy makers and courts must make. In fact, behavioural economics and the nudge movement that sprang from it are descriptive and empirical (Fischhoff & Eggers, 2013; Trzaskowski, 2011) and focus on means, not ends. Thus they do not help to draw the line between the legitimate influence of commercial activities and the illegal distortion of the average consumer's behaviour.

There is no minimal criterion to constrain nudging as a valid method of intervention that addresses all normative and ethical concerns, because the scientific grounding of nudging eliminates the possibility of its existence in the first place. By assuming preference ordering as exogenous, rational theory posits that a voluntary transaction performed by an agent is an expression of his or her free will and can be ‘objectively’ deemed as an improvement. This becomes an intellectually appealing normative criterion since, if preference ordering is exogenous, we can ask the following questions to evaluate two allocations A and B: if put in the condition, would agents perform the transactions necessary to move from A to B or vice versa? Since such a transaction is voluntary, it will be put in place only if someone is better off and the other at least not worse off. This is the Pareto criterion. Yet, the theoretical and empirical analysis of behavioural economists and psychologists collapses the normative edifice with the implication that ‘we cannot avoid making value judgements’ (Lichtenberg, 2013, p. 497). Since choice is context dependent (Pesendorfer, 2006) in the sense that the choice set influences the preferences, these cannot be assumed to be exogenous. Different allocations imply different preferences and thus lack of invariance of the criterion used to evaluate the alternatives. It would be as if in comparing two lengths the baseline metre changes. To give another example, dynamically inconsistent behaviour (e.g. addiction) is a problem of the dual self, between the preferences of morning, when you plan to quit smoking, and those of the evening when you buy cigarettes. Which preference system should be privileged?

Our core point is that there is no magic solution. Any form of policy intervention will impose a criterion against someone’s will (it will always be the case) and democracy requires: a) transparency from the political system in terms of the values selected in deciding and designing an intervention; b) and at least an evidence based justification of choice. Overt and explicit coercion by ‘nudgers’ is arguably better than covert manipulation by those designing environmental and contextual cues. This key point is not always explicit and clear in the mind of the policy makers requesting a behavioural study. In this respect, we see the importance of combining a discovery and a selection phase in research. This would improve the quality of the outputs, educate policy clients, and better manage expectations of and decisions informed by experimental behavioural studies.

Following Fischhoff & Eggers (2013) we envisage the ideal policy supporting behavioural research as comprising three steps (not necessarily by the same team, nor externalized by the policymaker). In a study involving consumer choice X the three steps should be:

Normative analysis. Identify, using consolidated theory and evidence, the possible outcomes of choices X and decision makers’ values to weight them.

Empirical analysis. Predict, using behavioural experiments, the choices X that consumers would actually make, under the conditions created by possible policies.

Prescriptive analysis. Characterise the gap between the normative ideal and the descriptive reality, with each policy option.

Evidently, to be coherent with our previous point the prescriptive implications of a gap between what would be normatively desirable and what is ascertained through a

behavioural experiment will require a value judgement on the side of the policy-makers. On the other hand, the empirical steps would be more effective if fully informed by the analysis concerning step 1 and leading to the selection of the policy options. Furthermore, in a phased *discovery-and-selection* behavioural approach there could be a dynamic feed back between step 1 and step 2, which would also shed more light on the final prescriptive assessment to be left to the judgement of the policy makers.

Toward a better conceptualisation of nudges

The lessons we draw from our experience with designing and delivering experimental behavioural studies to test policy options selected by the European Commission is that many situations and areas of interventions are complex and go beyond the parsimonious and simple nudges that have been made popular by Thaler and Sunstein. Breaking the impulsive flow of online gamblers requires well-articulated nudges, of which default settings are just one solution among many. Convincing consumers to buy eco-friendly cars only through nudges embedded into labels is unrealistic. Constraining the packaging options of cigarettes as the last channel of marketing for tobacco industry can be done effectively using fear appeals, leading to an emotion-driven behavioural change. This requires a discussion of nudging options through an attempt at a conceptual and theoretical systematisation.

There are essentially two ways to address biases originating in System 1: de-biasing and counter-biasing (Brest, 2013; Milkman *et al.*, 2009). De-biasing would involve complex strategies to activate System 2 rationality and analytical processing. Counter-biasing instead is playing one System 1 bias against another as in the classical simple nudges proposed by Thaler and Sunstein, e.g. default option leveraging status quo bias, incentives framed as losses to leverage loss aversion, or the famous ‘save more tomorrow’ leveraging hyperbolic discounting.

There is more than that. For instance, this dichotomy neglects the possibility of activating System 2 by stimulating System 1 with salience and affect. Our study on tobacco labelling shows that eliciting strong emotions seems to have a clear impact on cognitive processing and on conation. Thinking along these lines led us to formulate a preliminary taxonomy capturing different combinations of modes of thought and affective responses.

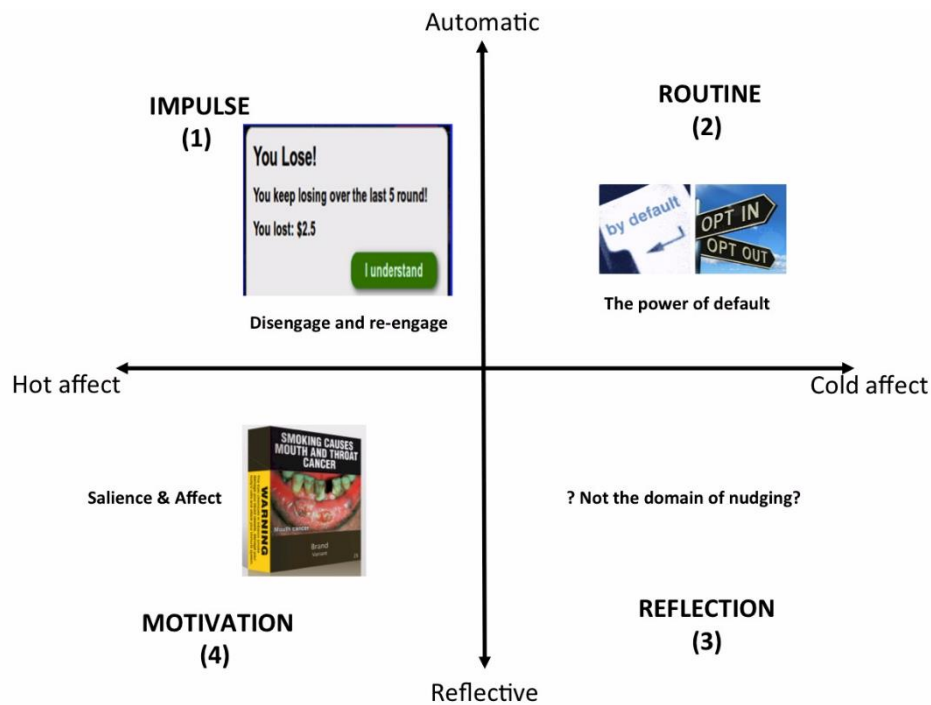


Figure 1

In Figure 1, the two dimensions identify automatic versus reflective mode (System 1 and System 2) and separately the presence or absence of hot affect. In quadrant 1 we have the typical impulsive processing and action where the mind is at the same time in automatic mode and with a hot affect. This is, for instance, the case of a player fully absorbed in his/her gambling activity. Here one can envisage nudges that disengage by stopping the human-machine interaction such as a pop-up alert to be clicked and then re-engage the player with some mental accounting to activate System 2. In quadrant 2 we have the classical situation of the counter-biasing nudges (default options). The third quadrant is that of the fully de-biasing strategies based entirely on system 2. Finally, in the fourth quadrant there is the type that concerns the strategies of hitting System 1 with strong emotions in order to activate System 2 toward the motivation to change behaviour. The picture (drawing from recent developments in cognitive sociology, e.g. DiMaggio, 2002; Samson & Voyer, 2012; Stark, 2012) could be extended with a third dimension; the distinction between nudges delivered in isolation or in social context. Advantages of such a taxonomic approach include synthesising and learning from experimental findings in different areas, and the development of a better appreciation of the characteristics of policy options that are, or are not, amenable to nudges of different types. It might also point to avenues for research seeking to establish the mechanisms lying behind behavioural change.

Experiential challenges of designing studies for policy makers

In our experience we have encountered four major challenges that we present here with a brief illustration followed by a sketch of how they could be avoided or overcome. The headings of the four subsections will be the proposed solutions.

1. Include discovery and selection phases. The kind of behavioural studies requested by the EC involved complex policy issues with little scope for simple and straightforward modification of default settings that are often the focus of ‘nudges’. They required more sophisticated and elaborated de-biasing and counter-biasing designs. Such studies would benefit from a discovery and exploratory phase before the selection and testing of specific policy options. However, the commissioned studies were meant to test a set of alternative policy options that the client had framed. The conceptual and theoretical challenge we encountered was one where *selection* was pitted against *discovery*. Sometimes the proposed policy options were not informed by the extant literature and/or were not amenable to the nudge approach. Equally, tight deadlines did not allow for learning within the study in a *stop & watch* approach; the opportunity to improve and change the design as a result of experimental learning was lost. This may create frustration and strain in the client-researcher relation as the former may see this new behavioural instrument as the magic bullet for evidence-based policy-making. Our experience suggests that the design of sound behavioural research in support of policy-making should include a discovery and a selection phase. Exploration is about discovery and discoveries lead to new thinking. In both the ‘selection’ and ‘discovery’ phases of policy-oriented behavioural studies more time should be allocated to the development of a joint understanding of the ‘problem’ and agreement on the goals of the study.

2. Convince the policymaker that sometimes ‘less is more’. The legitimate objective to obtain value for money may have unintended consequences. This is evidenced in the lengthy shopping list of policy options that researchers are invited to test. In the policy world, it may be difficult to grasp the logic of randomised control trials. As the number of options to be tested increases, the statistical power requirement in terms of sample sizes increases, as does the number of interactions. Yet on occasions, with time and budget constraints, we faced as many as ten or more treatments. Even with five options a main factor design is inevitable, omitting the detection of interaction effects that may be of policy relevance. Moreover, with many options to test and little discovery phase it is also unclear what outcomes (response variables) would be relevant to measure from a policy perspective. To the extent that it is feasible from a procurement perspective, a consultation process should involve the client and contractors to ensure that the technical specification of the study is sound and to ensure that the budget offered is maximised in relation to the scientific validity of the output. Third party external experts might facilitate this process.

3. Balance against conflicting validity pressures. In our experience with the EC, including as many countries as possible is a general requirement. While this is understandable on the ground of maximising external validity (representativeness of the sample and apparent relevance to different Member States), we have found little evidence of significant country

effects. Unless there is a strong presumption or indication from previous studies of relevant country effects, a prudent selection of countries should be the normal practice.

4. Establish a consultative client relation and involve intermediaries. Inevitably, given the novelty of the approach, there is some variation in knowledge and understanding of the logic of experimentation and insights from behavioural studies. Problems of communication and of managing expectations also emerged when the findings were presented either because of lack of familiarity with behavioural research findings or on account of unrealistic expectations from policy options that empirically showed minimal effects. Once again, we see a role for third party experts in advisory boards to act as intermediaries.

In conclusion, applied behavioural research is gathering momentum in many countries and across a range of policy domains. Maintaining the momentum would be greatly helped by efforts to develop a common language – a basis for better mutual understanding – between the worlds of research and policy making.

References

- Behavioural Insights Team. (2011). Applying behavioural insight to health. London: Cabinet Office.
- Blumenthal-Barby, J. S., & Burroughs, H. (2012). Seeking better health care outcomes: The ethics of using the "nudge". *The American Journal of Bioethics*, 12(2), 1-10. doi: 10.1080/15265161.2011.634481
- Brest, P. (2013). Quis custodiet ipsos custodes? Debiasing the policy makers themselves. In E. Shafir (Ed.), *The Behavioural Foundations of Public Policy* (pp. 481-493). Princeton, NJ: Princeton University Press.
- DiMaggio, P. (2002). Why cognitive (and cultural) sociology needs cognitive psychology. In K. Cerulo (Ed.), *Culture in Mind: Toward a Sociology of Culture and Cognition* (pp. 274–282). New York/London: Routledge.
- Dolan, P., M., H., D., H., King, D., & Vlaev, I. (2010). MINDSPACE: Influencing behaviour through public policy. London: Cabinet Office, Institute of Government.
- Fischhoff, B., & Eggers, S. (2013). Questions of competence: The duty to inform and the limits to choice. In E. Shafir (Ed.), *The Behavioural Foundations of Public Policy* (pp. 217-230). Princeton, NJ: Princeton University Press.
- Kahneman, D. (2013). Foreword. In E. Shafir (Ed.), *The Behavioural Foundations of Public Policy* (pp. VII-IX). Princeton, NJ: Princeton University Press.
- Lichtenberg, J. (2013). Paternalism, manipulation, freedom, and the good. In E. Shafir (Ed.), *The Behavioural Foundations of Public Policy* (pp. 494-498). Princeton, NJ: Princeton University Press.
- Milkman, K. L., Chugh, D., & Bazerman, M. H. (2009). How can decision making be improved? *Perspectives on Psychological Science*, 4(4), 379-383.

- Oullier, O., & Sauneron, S. (2010). Improving public health prevention with behavioural, cognitive, and neuroscience. Paris: Centre d'analyse stratégique.
- Pesendorfer W. Behavioral economics comes of age: A review essay on advances in behavioral economics. *Journal of Economic Literature* 2006;44(3):712-21.
- Samson, A., & Voyer, B. (2012). Two minds, three ways: Dual system and dual process models in consumer psychology. *AMS Review*, 2(2-4), 48-71.
- Shafir, E. (Ed.). (2013). *The behavioural foundations of public policy*. Princeton, NJ: Princeton University Press.
- Slovic, P. (1995). The construction of preferences. *American Psychologist*, 50, 364-371.
- Stark, M. (2012). Reconciling bioethics with health care strategies born of behavioral economics and psychology. [Comment]. *The American Journal of Bioethics : AJOB*, 12(2), 28-30. doi: 10.1080/15265161.2011.634491
- Strack, F., & Deutsch, R. (2004). Reflective and impulsive determinants of social behavior. *Personality and Social Psychology Review*, 8(3), 220-247.
- Strack, F., Werth, L., & Deutsch, R. (2006). Reflective and impulsive determinants of consumer behavior. *Journal of Consumer Psychology*, 16(3), 205-216.
- Thaler, R. (1980). Toward a positive theory of consumer choice. *Journal of Economic Behavior and Organization*, 1, 36-60.
- Thaler, R., & Sunstein, C. (2008). *Nudge : Improving decisions about health, wealth, and happiness*. New Haven: Yale University Press.
- Thaler, R. H., & Sunstein, C. R. (2003). Libertarian paternalism. [10.1257/000282803321947001]. *American Economic Review*, 93(2), 175-179.
- Thompson, V. (2009). Dual-process theories: A metacognitive perspective. In J. Evans & K. Frankish (Eds.), *In two minds: dual processes and beyond* (pp. 171-195). Oxford: Oxford University Press.
- Trzaskowski, J. (2011). Behavioural economics, neuroscience, and the Unfair Commercial Practices Directive. *Journal of Consumer Policy*, 34(3), 377-392. doi: 10.1007/s10603-011-9169-2
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science* 185, 1124–1131.